

REMARKS

I. Rejection Under 35 U.S.C. § 102

Claims 1-5 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,488,492 to Adams *et al.* (“Adams”).

The Applicant submits that the rejection of claims 1-5 is moot in light of the amendments above. Specifically, independent claim 1 has been amended to recite, in relevant part:

An igniter comprising...

...a lock lever for locking the igniting action, said lock lever capable of engaging said base portion of said rod-like extension to interfere with the rotation of said rod-like extension when the lock lever is operated to release the lock...

Adams does not teach an igniter having such a lock lever. In the Office Action, the Examiner states that Adams teaches an igniter “provided with a lock lever (62) for locking the igniting action in the free state [col 13, line 3-17].” See Office Action at ¶ 4.

However, in Adams the “hook (62)” (*i.e.* lock lever) does not directly engage the “wand (10)” (*i.e.* rod-like extension). As shown in Figure 10 of Adams, the hook (62) engages end (126) of cam follower (116) to prevent actuation of the trigger. (Adams, col. 11, line 50 – col. 12, line 15). The hook (62) does not engage any portion of the wand (10) in the manner that the lock lever engages the base portion of the rod-like extension as recited in claim 1. Rather, Adams teaches:

Because first detent 123a includes sloped surface portion 135, wand assembly 10 must be pivoted a predetermined distance, preferably about 40°, before hook 126 is disengaged from hook 62. When wand assembly 10 is in the closed position, or pivoted less than the predetermined distance, hook 126 is

aligned with hook 62 of trigger 25 such that hook walls 62a and 126a will engage upon depression of trigger 25.

See Adams at col. 13, lines 6-13. That is, the hook (62) functions to block the trigger when the wand (10) is in the closed position; the wand (10) must be opened to release the hook (62) from the cam follower (116). The cam follower (116) mediates between the hook (62) and the wand (10). Further, unlike claim 1, the hook (62) does not appear to interfere with the rotation of the wand (10) when the hook (62) is operated to release the lock.

By contrast, in claim 1 the lock lever directly engages the base portion of the rod-like extension. The specification supports claim 1 by teaching:

The lock lever 10 is further provided with a sliding contact portion 12 on the leading end of the control portion 10b. The sliding contact portion 12 extends toward the ring portion 33d of the base portion 33 of the rod-like extension 3 and is brought into a pressure contact with the outer periphery of the ring portion 33d when the front portion of the control portion 10b depressed inward to limit rotation of the ring portion 33d or the angle change of the rod-like extension 3 under the resistance, thereby fixing the ring portion 33d or the rod-like extension 3.

See Specification at ¶ [0044]. Since Adams does not teach every element of claim 1, Adams does not anticipate claim 1. Accordingly, the dependent claims therefrom are not anticipated as well.

II. Rejection Under 35 U.S.C. § 103

Claims 6-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Adams in view of U.S. Patent No. 4, 300,198 to Davini (“Davini”).

For a rejection under § 103(a), the law requires that the scope and content of the prior art be determined; that the differences between the prior art and the

claims be ascertained; and that the level of ordinary skill in the art be resolved in order to assess what would, or would not be obvious to a person of ordinary skill in the art. *See generally, KSR v. Teleflex*, 127 S.Ct. 1727 (2007); *Graham v. John Deere*, 383 U.S. 1, 17-18, 86 S.Ct. 684 (1966). The “rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *See* MPEP §2142 (citing *In re Kahn*, 441 F.3d 988 (Fed. Cir. 2006)).

Regarding claim 6, the Examiner noted that Adams “does not disclose a balancing weight, which is understood to hold the rod-like extension in a horizontal position relative to the movement of the ignitor body. Davini teaches a similar concept that uses types of weights in a pivotal connection to secure an arm of a robot in a horizontal position relative to the supporting shaft [col 6, line 50-68].” *See* Office Action at ¶10. The Examiner concluded that “[i]t would have been obvious to a person of ordinary skill in the art at the time of the invention to have such a balancing means because the technique to do so was known to one of ordinary skill in the art, yielding the predictable result of maintaining a horizontal position.” *Id.*

A. Davini is Non-Analogous Art

First, the Applicant submits that it would not have been obvious to combine Adams with Davini because Davini is non-analogous art. Davini is directed to a robot “with light-weight, inertia-free programming device” in U.S. Class 364/513, for which a search of the Main Classification Menu of the PTO database indicates that there is no US to IPC table for Class 364. Davini also belongs to U.S. 318/568, which

is for “Electricity: Motive Power Systems.” Whereas Adams is directed a “multi-mode lighter” in U.S. Class 431/453 for “Combustion”/“Correlation of Fuel or Power Supply with Component Movements in a Disabling and Enabling Sequence.”

The United States Court of Appeals for the Federal Circuit has stated the analogous-art test requires that the PTO “show that a reference is either in the field of the applicant’s endeavor or is reasonably pertinent to the problem with which the inventor was concerned in order to rely on that reference as a basis for rejection.” See In re Khan, *supra*, 441 F.3d at 987 (citing In re Oetiker, 977 F.2d 1443, 1447 (Fed. Cir. 1992)). References are selected as being reasonably pertinent to the problem based on the judgment of a person having ordinary skill in the art. *Id.* (“[I]t is necessary to consider ‘the reality of the circumstances,’-in other words, common sense-in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor.” (quoting In re Wood, 599 F.2d 1032, 1036 (C.C.P.A. 1979))). In Khan, the Federal Circuit explained that this test begins the inquiry into whether a skilled artisan would have been motivated to combine references by defining the prior art relevant for the obviousness determination, and that it is meant to defend against hindsight. *Id.* (citing In re Clay, 966 F.2d 656, 659-60 (Fed. Cir. 1992)). “The combination of elements from non-analogous sources, in a manner that reconstructs the applicant’s invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness.” Khan, 441 F.3d at 987 (quoting In re Oetiker, *supra*, 977 F.2d at 1447).

Here, Davini is not in the field of the Applicant's endeavor or is reasonably pertinent to the problem with which the inventors of the invention claimed in claim 6 were concerned. One of the principal object of the invention in Davini is "to provide a robot with a low-inertia teachable teaching arm manually taught which is dynamically, continuously compensated as to the effect of gravity forces so that it can be smoothly and accurately taught movements of a tool held by it, in three dimensional space." *See* Davini, at col. 1, lines 30-36. In the present application, "the primary object of the present invention is to facilitate changing the direction in which the rod-like extension is directed with respect to the igniter body to improve the ignitability." *See* Specification at ¶ [0010]. Therefore, it would not have been obvious to combine Adams with Davini in the manner asserted by the Examiner.

B. The Combination of Adams and Davini Does Not Render Claim 6 Obvious

Second, even if Adams and Davini were combined, the combination would not render the invention in claim 6 obvious.

The Examiner cites to Davini, at col. 6, lines 50-68, for the proposition that it teaches "a similar concept that uses types of weights in a pivotal connection to secure an arm of a robot in a horizontal position relative to the supporting shaft [col 6, line 50-68]." *See* Office Action at ¶10. Davini, at col. 6, lines 50-68, teaches:

The horizontal arm portion of a teaching arm according to the invention is balanced in a similar way. As illustrated in FIG. 10 a teaching arm assembly or unit 90 having a vertical arm section 91 and horizontal arm sections 92, 93 connected to a balancing or compensating device similar to that described heretofore. In this instance a piston rod 94 is connected by a pivot pin 95 to a lever 96 pivoted about a pivot axis 97. A transmission rod 98 is pivotally connected to the lever arm 96 and to a short arm 99 by pivot 100,101.

The horizontal arm sections are pivoted at 102 on the vertical arm section 91. The balancing or compensating device 103 has a constant air pressure maintained therein by a constant air pressure regulator 104 from an air pressure source, not shown. **As the horizontal arm unit 92, 93 moves up or down from the horizontal position thereof the pressure regulator 104 maintains a constant air pressure and balances the horizontal arm unit.** That is it compensates for the gravitational forces acting thereon.

(emphasis added) In Davini, the horizontal arm is balanced by the pressure regulator. Moreover, unlike claim 6, which recites that “the rod-like extension is balanced by weights positioned on the ring portion thereof opposite to each other, with the center of rotation of the rod-like extension intervening therebetween such that said rod-like extension is held horizontal in a free state,” Davini does not teach counter-balancing weights with the horizontal arm therebetween.

Rather, Davini teaches:

A teaching arm 10 is illustrated in FIG. 1 and the drawing is illustrative of the known method of balancing a teaching arm or programmer. As shown a vertical section 11 is pivoted at 12 for movement on a base 13 relative to the vertical and is provided with a counterweight 14 to balance it. A horizontal arm has sections 15a, 15b pivotal relative to each other and pivotally mounted at 16 for movement to and up and down from a horizontal position. It is balanced by a counterweight 17. Assuming that such a programmer were provided with a tool connected at 18 and the tool were moved in a pattern or path to be memorized and repeated it can be seen that the counterweights create additional problems due to the high inertia.

In order to move the free end of the upper arm section 15 in a path along three dimensions the vertical arm section must be pivoted about its pivot 12 and rotated about its longitudinal axis. The horizontal arm must be movable up and down about its pivot at 16. Thus it can be seen that the use of counterweights for balancing such a structure introduces the effect of inertia of the masses of the counterweights. Thus to move the tool, not shown, fixed at 18 the inertia of the

counterweights must be overcome and as the free end is moved in different directions the braking and change of direction is subject to the inertia deceleration and acceleration forces due to one or both of the counterweights. Thus the tool cannot be moved easily and smoothly in space. **The use of counterweights as a viable compensating technique for gravitational forces must be rejected.**

...According to the invention the elimination of the use of counterweights requires the use of a balancing or compensating system generating a force which is constant while the effective point of application is changing widely.

See Davini at col. 4, lines 3-17. As such, Davini teaches away from the use of counterweights in the manner claimed in claim 6. There can be no finding of obviousness where a reference teaches away from the proposed modification or combination, or where the proposed modification or combination would destroy the functionality of the reference for its own purpose. See *Gillette v. S.C. Johnson*, 919 F.2d 720, 724 (Fed. Cir. 1990); *In re Geisler*, 116 F.3d 1465, 1469 (Fed. Cir. 1997); *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984).

Therefore, claim 6 is not obvious over Adams in view of Davini. And the dependent claims therefrom are not obvious as well.

CONCLUSION

The Examiner is respectfully requested to reconsider his position in view of the remarks made herein. It is believed that claims 1-2, 4-6, and 8-9 have been placed in condition for allowance, and such action is respectfully requested.

If the Examiner believes that a telephone or other conference would be of value in expediting the prosecution of the present application, enabling an Examiner's amendment or other meaningful discussion of the case, Applicant invites the Examiner to contact Applicant's representative at (310) 777-8399.

If any additional fees are required as a result of this amendment, or any credit needs to be made for overpayment of fees, the Commissioner is hereby authorized to charge such fees to Deposit Account No. 500703.

Respectfully submitted,

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